

leaving a trail like a narrow cloud for some length of time. Thunder at Pepeekeo, May 1. Snow on Mauna Loa 21st. Heavy surf 15-19, 23-28.

The rainfall of 1902 was extraordinary in amount in all districts, Naalehu and Hilea in Kau and Waiawa in Kauai being the only exceptional stations, while at some points the rainfall was more than twice the normal.

Figures in black type indicate that one or two months are missing from the year's record, but are interpolated from adjacent stations. Where three or more months are lacking the station is omitted from this list.

Mean temperature table for May, 1903.

Stations.	Elevation.	Mean max.	Mean min.	Cor. av'ge.
	<i>Feet.</i>	<i>o</i>	<i>o</i>	<i>o</i>
Pepeekeo	100	76.8	68.3	71.9
Hilo	40	84.3	66.5	74.7
Kohala	521	77.5	65.6	70.9
Waimea	2,730	70.4	58.3	63.7
Waikoa	2,700	83.6	55.9	69.0
United States Magnetic Station	50	83.8	67.1	74.8
United States Experimental Station	350	80.6	68.5	74.2
Waikiki	15	80.8	70.5	75.0

HIGH WINDS AT POINT REYES LIGHT, CAL.

By Mr. W. W. THOMAS and Prof. A. G. McADIE.

Mr. W. W. Thomas, Observer, Point Reyes Light, Cal., through Prof. Alexander G. McAdie, communicates tables and charts comparing together the wind velocities during two memorable gales at the former station in May, 1902, and 1903. He adds: "It is believed that the record of an average hourly movement of the air, exceeding 50 miles per hour, for a period of nine consecutive days (May 13-23, 1903) is unparalleled in the records of the Weather Bureau." Professor McAdie says: "I have added a few notes giving the air movement at Point Lobos, Cal., San Francisco, Mount Tamalpais, and Southeast Farallon, as the grouping of the stations makes it possible to discuss the air movement at sea level, on the ocean, a little above sea level on headlands, and at a height of half a mile on Tamalpais."

Two memorable northwest gales at Point Reyes Light, Cal.

Date.	Average velocity, miles per hour.				Daily movement.		Maximum velocity.	Extreme velocity.	Time of maximum velocity.
	0 to 6 a.m.	6 a. m. to 12 noon.	12 noon to 6 p. m.	6 p. m. to 12 midnight.	Total.	Average hourly.			
1902.									
May 13.....	7	4	11	10	188	8	16	16
14.....	11	14	12	22	347	14	28	30
15.....	29	31	31	36	756	31.5	45	50
16.....	39	38	46	58	1,086	45	76	80	10:30 p. m.
17.....	64	54	67	78	1,580	66	90	96	7:00 p. m.
18.....	75	70	79	88	1,876	78	110	120	8:50 p. m.
19.....	59	45	59	64	1,360	57	75	80	7:00 p. m.
20.....	40	27	31	52	905	38	57	62	10:45 a. m.
21.....	34	12	11	22	474	20	48	50	12:50 a. m.
22.....	21	7	9	12	291	12	27	29
23.....	17	7	10	15	287	12	26	30
1903.									
May 13.....	13	9	11	35	410	17	48	50	10:15 p. m.
14.....	51	39	47	55	1,153	48	64	66	9:00 p. m.
15.....	43	44	63	78	1,371	57	89	93	7:55 p. m.
16.....	72	60	65	82	1,673	70	94	98	9:55 p. m.
17.....	62	42	51	67	1,339	56	89	92	12:05 a. m.
18.....	58	52	48	59	1,247	52	68	70	12:10 a. m.
19.....	45	45	47	50	1,124	47	60	62	12:15 a. m.
20.....	42	42	50	50	1,103	46	58	60	3:50 a. m.
21.....	47	47	53	57	1,227	51	64	66	8:45 a. m.
22.....	42	39	39	45	986	41	59	61	11:30 a. m.
23.....	47	19	18	30	679	28	52	54	12:45 a. m.

As the diagram accompanying Mr. Thomas's communication is but little more instructive than the tabular data, we refrain from publishing it; the proper fractions given by Mr. Thomas have been omitted as the nearest whole figure is sufficient; the maximum hourly velocities are the averages for five minutes;

the extreme hourly velocities are deduced from the records for single miles. The table referred to by Professor McAdie will be found on page 220.—C. A.

LANTERN SLIDES.

Dr. O. L. Fassig communicates the following list of lantern slides that he has made for his lectures on meteorology at Baltimore, Md. Duplicates of the slides marked "n" (negatives) can be furnished those who desire them at the rate of 25 cents each; a negative and slide will cost 50 cents. If any item includes many slides the corresponding number is given.

- Whirling alto-stratus.
- Umbrella cloud. MONTHLY WEATHER REVIEW. 1902.
- Diurnal barometric wave, North America and South America.
- Diurnal barometric wave, path of center.
- Solar halo, Columbus, Ohio.
- Cluster of snow crystals.
- The "Umbria" after a snowstorm.
- Effect of heavy snow on trees.
- Effect of hailstorm on corn field.
- Distant view of tornado.
- Fake tornado.
- New Richmond tornado.
- Louisville tornado, March 27, 1890.
- West Indian hurricane, 8 a. m., August 7, 8, and 13, 1899.
- Galveston hurricane, September 8, 1900. (Isobars.)
- Typical storm area, February 28, 1902, 8 a. m.
- Typical Gulf storm, February 20, 21, and 22, 1902.
- Typical Lake storm, December 24, 25, and 26, 1902.
- Storm tracks and storm frequency.
- Storm tracks, January and February, 1903, United States.
- Daily weather map, United States. Typical low area in Mississippi Valley.
- Paths of highs and lows across the United States with rate of progress.
- Flat map, June 15, 1896, 8 a. m.
- Normal temperatures in United States, January.
- Normal temperatures in United States, July.
- Baltimore daily weather, 1871-1902; February 22, March 4, and July 4.
- Baltimore normal daily temperature; average maximum, minimum, and barometer.
- Baltimore temperatures; daily ranges and extremes.
- Baltimore monthly temperature departures, 1817-1902.
- Diurnal variation of temperature at Baltimore on clear, cloudy, and rainy days.
- Relation between temperature and wind direction January, April, July, and October, at Baltimore.
- Diurnal and annual changes of wind velocity at Baltimore.
- Diurnal variation of temperatures at Baltimore as affected by wind velocity.
- Baltimore rainfall probability; 5-day means, daily and average amounts.
- Normal daily temperatures at Baltimore, April 20-June 28.
- Sun-spot frequency and temperatures at Baltimore.
- Unusual succession of rainy Sundays, Baltimore, September, 1902, to February, 1903.
- Fog billows, San Francisco, Cal.
- The moon and the weather.
- The coronal period and meteorological and magnetic phenomena.
- Sun-spot frequency and temperature, rainfall, hail, and vintages.
- Sun-spot frequency and magnetic declination.
- Marvin's kite meteorograph.
- Typical cloud forms.
- Typical cumulus. Hann.
- Thunderhead, Java.
- Typical cloud forms arranged in order of occurrence. (Inward.)
- Hail clouds.
- Ideal cross section of hail cloud.
- Hail stones.
- Hail shooting in Italy.
- An aurora, Germany, eighteenth century.
- Solar halo and mock suns.
- Solar halo, seventeenth century.
- Snow crystals.
- Snow under the equator.
- Lightning flashes.
- Tree struck by lightning.
- Approaching tornado. Frank Leslie's Weekly.
- Tornado, Germany, sixteenth century.
- Waterspouts, Florida coast.
- Sun-spot frequency and June temperature at Bremen.
- Rynmann's Wetterbuchlein. Edition of 1510, Augsburg.